

## ABSTRACT

A method is provided for receiving a signal modulated according to a multilevel coding technique. The method includes at least two coding levels each having different noise robustness. The signal includes a plurality of symbols each comprising at least one bit, assigned to one of the coding levels. The method further includes at least one decoding iteration including successive steps of decoding each of the received bits, at least one of the decoding steps taking into account the result of at least one possible previous decoding step. The method further includes decoding the bits according to a predetermined sequence taking into account the robustness of the levels, wherein the bit(s) assigned to the decoding level that have the higher noise robustness, called a most robust level, are decoded first.